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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/558,756

12/01/2005

Hideki Kasamatsu

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09/25/2007

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EXAMINER

MANCUSO, HUEDUNG XUAN CAO

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

09/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/558,756

Applicant(s)

KASAMATSU ET AL.

Examiner

Huedung Cao Mancuso

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 3-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. The applicant's remarks have been fully considered, but are not found to be convincing. Specifically, the applicant argues that the new claims are not met by the the previous rejection of applicant's admitted prior art (AAPA) and Brown. While the claims have been rewritten, they are similar in scope to those filed earlier. The applicant argues that the applied prior art “does not disclose or suggest 'a three-dimensional joint” and that Brown “merely discloses two one-dimensional joints” (page 5 of the response). The examiner respectfully disagrees with this assertion. Firstly, while the applicant argues that the claimed “three-dimensional joint” means that the joint allows for movement in three dimensions pages 5-6 of the response). The claims are not this specific. Giving the term “three-dimensional joint” its broadest reasonable interpretation, this can simply mean a joint (connector) that is in three dimensions; which would be satisfied by Brown or any other real-world joint since every real-world item is inherently in “three-dimensions”. Secondly, the term can be interpreted to mean that the joint allows motion in “three-dimensions” (i.e., in three-dimensional space). Brown would also satisfy this because it allows rotation about at least the horizontal and vertical axes, as stated by the applicant in their remarks. Rotation about two axes means that the item being rotated is moving through a three-dimensional space, which also satisfies the claim limitation. It is suggested that if applicant means what they argue (that “the three-dimensional joints pivots about three axes orthogonal to each other” or other such language) that the claims be amended to actually recite this limitation (it is noted that the examiner is NOT stating that this would make the claims allowable, only that

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they would then be the same as is argued by the applicant). Further, since the AAPA (Fig 5 of the applicant's specification) shows movement in two different axes and Brown shows movement about two axes, where these two sets of axes are not the same (though one axis of the AAPA (about pivot 92) and one axis of Brown (the "H" axis) are the same), when the two are combined they would effectively provide a three dimensional joint with movement with respect to three different axes (as in polar coordinates, for example).

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior art (US 2007/0024507 A1, Specification, paragraphs [0005, 0006]) in view of Brown (US 5,764,194).

As to claim 3, in addition to the remarks above and in the previous office action, the AAPA discloses an antenna device comprising: a base case including a radio module, a movable case including a plurality of antennas, and a three-dimensional joint attached to said base case and said movable case, wherein a plurality of cables are attached to said plurality of antennas and said radio terminal, and are bundled to pass through a through hole in said three-dimensional joint, and wherein said radio module selects one or more of said plurality of antennas in order to maintain good communication conditions. All of this is disclosed by the AAPA (and not argued

by the applicant) in paragraphs [0005]-[0006] of the specification, except for the claimed “three-dimensional joint”. As explained above, while the AAPA does show movement in two directions (which is in a three dimensional space), it does not explicitly teaches that the joint is the “three-dimensional joint” as claimed by applicant. Additionally, Brown also discloses a base case (40), three-dimensional joints (either the elements in Figs 3a-3b (which include elements 60, 62, 80, 82 in Fig 1 or the elements (54, 56, 58) that connect the dipole antenna to the base in Figs 1 and 2), a plurality of antenna (50a, 50b, 24), and connecting cables. See col. 4, lines 13-60 and col. 5, lines 1-60. Brown teaches such three-dimensional joint is widely used in the art see Brown (as indicated above) to allow for movement in three-dimensions. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Prior art’s three dimension joint, as taught by Brown because both of their system is directed to antenna system and movement in three dimensions allows for a greater flexibility in positioning the antenna to get the best reception. Further, as explain above, since the AAPA (Fig 5 of the applicant's specification) shows movement in two different axes and Brown shows movement about two axes, where these two sets of axes are not the same (though one axis of the AAPA (about pivot 92) and one axis of Brown (the “H” axis) are the same), when the two are combined they would effectively provide a three dimensional joint with movement with respect to three different axes (as in polar coordinates, for example).

As to claim 4, wherein the three-dimensional joint comprises: a pivot portion projecting from said movable case, a spherical portion provided on an end of said pivot portion, and a sphere receiving portion provided in said base case, to which said spherical portion fits so as to rotate freely, wherein said through hole penetrates through said pivot portion and said spherical

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portion to open an inside of said movable case to an inside of the base case, in addition to the preceding, Brown shows using a spherical pivot portion as shown in Figs 1-3.

As to claim 5, wherein the three-dimensional joint comprises: a pivot portion projecting from said base case, a spherical portion provided on an end of said pivot portion, and a sphere receiving portion provided in the movable case, to which said spherical portion fits so as to rotate freely, wherein said through hole penetrates through said pivot portion and said spherical portion to open an inside of the base case to an inside of the movable case. See claim 4, above.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Inquiries***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huedung Mancuso whose telephone number is (571) 272-1939.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens, can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huedung Mancuso  
Patent Examiner

A handwritten signature in black ink, appearing to read 'Huedung Mancuso', with a stylized, flowing script.